

## WHAT IS CLAIMED IS:

1. A digital contents generating apparatus comprising:
  - an electronic watermark-data output unit for outputting predetermined electronic watermark data;
  - electronic watermark-data embedding unit for embedding the electronic watermark data output by said electronic watermark-data output unit in digital contents;
  - an encryption-key generating unit for generating an encryption key on the basis of said electronic watermark data and a predetermined IP address;
  - an encryption unit for encrypting the digital contents embedded with electronic watermark data by means of the generated encryption key and outputting the encrypted digital contents to a communication network; and
  - a decryption-key generating unit for generating, on the basis of said electronic watermark data and IP data received from said communication network, a decryption key for the decryption of the encrypted digital contents, and outputting said decryption key to said communication network.
2. A digital contents generating apparatus according to Claim 1, wherein said encryption unit stores said encrypted digital contents in a data storage medium.
3. A digital contents generating apparatus comprising:
  - a discreet cosine transform unit for generating DCT coefficients by processing digital contents with a discreet cosine transform;
  - an electronic watermark-data output unit for outputting predetermined electronic watermark data;



communication network, and for receiving said decryption key from said communication network.

6. A digital contents reproducing apparatus according to Claim 5, wherein said electronic watermark data extraction unit receives said encrypted digital contents embedded with electronic watermark data from a data storage medium.

7. A digital contents reproducing apparatus comprising:  
an electronic watermark data extraction unit for receiving encrypted digital contents embedded with electronic watermark data from a communication network, and extracting said electronic watermark data from the encrypted digital contents;

a decryption unit for decrypting said encrypted digital contents by means of a decryption key;

an inverse DCT unit for performing the inverse discrete cosine transform of an output of said decryption unit;

a reproducing unit for reproducing an output of said inverse DCT unit and displaying a reproduced output on a display unit; and

a network interface unit for outputting the extracted electronic watermark data and a predetermined IP address to said communication network, and receiving said encryption key from said communication network.

8. A digital contents reproducing apparatus according to Claim 7, wherein said electronic watermark data extraction unit receives said encrypted digital contents embedded with electronic watermark data from a data storage medium.

9. A digital contents providing system comprising a communication network, a digital contents generating apparatus and a digital contents reproducing apparatus, said digital contents generating apparatus and said digital contents reproducing apparatus being inter-

connected via said communication network, said digital contents generating apparatus comprising:

- an electronic watermark-data output unit for outputting predetermined electronic watermark data;

- an electronic watermark-data embedding unit for embedding the electronic watermark data received from said electronic watermark-data output unit in digital contents;

- an encryption-key generating unit for generating an encryption key on the basis of said electronic watermark data and a predetermined IP address;

- an encryption unit for encrypting the digital contents in which said electronic watermark data has been embedded, by means of the generated encryption key; and

- a decryption-key generating unit for generating a decryption key for decrypting, on the basis of said electronic watermark data and said IP address received from said communication network, the encrypted digital contents, and outputting the decrypted digital contents to said communication network;

said digital contents reproducing apparatus comprising:

- an electronic watermark data extraction unit for receiving said encrypted digital contents from said communication network and extracting said electronic watermark data from said encrypted digital contents;

- a decryption unit for receiving said decryption key from said communication network, and decrypting said encrypted digital contents by means of said decryption key;

- a reproducing unit for reproducing an output of said decryption unit and displaying a reproduced output on a display unit; and

means for outputting the extracted electronic watermark data and the predetermined IP address to said communication network.

10. A digital contents providing system comprising a communication network, a digital contents generating apparatus and a digital contents reproducing apparatus, said digital contents generating apparatus and said digital contents reproducing apparatus being interconnected via said communication network, said digital contents generating apparatus comprising:

- an electronic watermark-data output unit for outputting predetermined electronic watermark data;

- an electronic watermark-data embedding unit for embedding the electronic watermark data received from said electronic watermark-data output unit in digital contents;

- an encryption-key generating unit for generating an encryption key on the basis of said electronic watermark data and a predetermined IP address;

- an encryption unit for encrypting the digital contents in which said electronic watermark data has been embedded, by means of the generated encryption key, and outputting the encrypted digital contents to a data storage medium; and

- a decryption-key generating unit for generating, on the basis of said electronic watermark data and IP address received from said communication network, a decryption key for the decryption of the encrypted digital contents, and outputting said decryption key to said communication network;

- said digital contents reproducing apparatus comprising:

- an electronic watermark data extraction unit for receiving said encrypted digital contents from said data storage medium and extracting said electronic watermark data from said encrypted digital

contents;

a decryption unit for receiving said decryption key from said communication network and decrypting said encrypted digital contents by means of said decryption key;

a reproducing unit for reproducing an output of said decryption unit and displaying a reproducing output on a display unit; and

means for outputting the extracted electronic watermark data and the predetermined IP address to said communication network.

11. A program for carrying out steps for the embedding of electronic watermark data in digital contents by the use of a computer system including a processor and a memory unit, said steps comprising:

generating an encryption key on the basis of said electronic watermark data and a predetermined IP address;

encrypting digital contents embedded with said electronic watermark data, by means of said encryption key and outputting the encrypted digital contents to a communication network; and

generating, on the basis of said electronic watermark data and IP address received from said communication network, a decryption key for the decryption of said encrypted digital contents, and outputting said decryption key to said communication network.

12. A program for carrying out steps for extracting electronic watermark data from digital contents embedded with said electronic watermark data by the use of a computer system including a processor, memory unit and display means and displaying said digital contents by said display means, said steps including:

receiving encrypted digital contents embedded with electronic watermark data from a communication network and extracting said electronic watermark data from the encrypted digital contents;

[illegible]